ARCHITECTVRE

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ARCHITECTURAL CRITICISM.

OF the recent Government competitions, one of the most interesting from the unusual number and prominence of the competitors, was that held for the United States Post Office in New Haven, five designs for which are published in this number. As the winning design was not obtainable, criticism of those published would be out of place, but in the judgment itself there are several features which deserve comment. There have been many post offices and court houses built by the Government in the last twenty years, many of which from point of view of arrangement have been good and some of which have been bad, and it seems remarkable in view of the experience thus gained that the authorities in Washington have not adopted some plan which could be more or less standardized and which could govern competitions such as this, so that the great essentials of light and convenience of arrangement would be certainly secured. Considering the width of the site for the New Haven Post Office, only about 140 feet front, and considering the high buildings which come practically up to the lot line at one side, a closed light court does not seem the proper solution of the problem, especially as the rear and one side are masked from the street by the adjacent buildings. The winning design has such an enclosed light court, and the court room, projecting as it does over the work room, prevents direct overhead light on the post office screens in the corridor and darkens that part of the work room where most light is needed. The court room too is cut off by the circulation from direct connection with the judges' room and other dependencies, and as its windows open only on the enclosed court, would be ill ventilated, and subject in summer to the noise of the post office machinery arising from the skylight of the work room below.

In other words, it would seem that the award has been made wholly on the elevation which, beautiful as it may be, will lack the axial location demanded of a pediment and will suffer from the plethora of pediments surrounding it. In the placing of the mentions the committee seems to have displayed the most singular lack of consistency. If they decided that a closed court and a pediment were the correct solution of the problem, would it not be the natural thing to place second a design which had a pediment if not a closed court; but the second was a scheme with an order and attic between pylons and with an open E shaped plan; the third had a strong resemblance to the New York City Hall and an L shaped plan, while the fourth was a restrained treatment of an order on a basement. All of which may tend to encourage originality (if originality means a departure from what was successful in recent Government competitions), but leaves unsatisfied a longing to know just what the fifth mention would have been.

ARCHITECTURE published last month the latest of the Princeton buildings, Holder Hall, and is this month illustrating a portion of Campbell Hall (Plate LXXIX), one of the newer dormitories, designed by Cram, Goodhue & Ferguson. It is a matter of continued gratification to the university and to the architects at large that we should have found here in America a number of men so well fitted to design in a foreign style with suitable adaptations to American needs as have been the architects of the various buildings upon the university campus. Campbell Hall was the first erected by Cram, Goodhue & Ferguson, the architects of the Graduate Building now in course of construction, and as might be expected from the designers of the West Point buildings, it has been handled with a complete grasp of the situation and unerring judgment in the selection of details. This so-called English

Collegiate style is one where the ordinary canons of artistic success are completely disregarded; symmetry of detail, as well as of mass, is necessarily forgotten and the architect must depend for his success upon a nice discrimination in his selection of materials, both physical and artistic, and their combination in a structure which should stand forth solidly as a unit, although its excellence should appear to be largely fortuitous. In the particular example here illustrated, one's natural tendency of design would be to place the archway in the center of the tower, and certainly one would hesitate a long time before running the crocketed finial on one side of the doorway up to the angle on the flat buttress, while on the other it is free standing, and then fill in the space between the center of the archway and the free standing finial with rather elaborate carving, while the other side is blank. Yet, if symmetry is lacking that most essential feature of all artistic work and which symmetry is only an easy means of obtaining, balance of composition has not been lost sight of.

Almost all of the buildings at Princeton have been especially successful in the surface texture of their materials, due probably to the fact that the original architects of the newer work, Cope & Stewardson, selected the most happy combination of nica schist and limestone for the field and trim respectively, which successive architects have adopted as a sort of standard and varied to suit their individual tastes. In Campbell Hall, while the stone is not the same as in the original buildings, the method of laying has followed the other, and even this has been considerably improved upon in Holder Hall, illustrated last month. The slate roofs are another feature worthy of comment. In the original buildings a small regular size slate was used which Cram, Goodhue & Ferguson, in Campbell Hall, have changed to a slate graduated in size and thickness, and which Frank Miles Day, in Holder Hall, has again varied by introducing parti-colored slate and increasing the weight of the lower courses. The improvement of most of the buildings over their predecessors in the use of materials is astounding and shows how tremendous is the cumulative value of experience. It seems unfortunate that our commercial buildings in New York, the loft buildings, office buildings and apartment houses have not appealed to their architects sufficiently to make them work along some continuous line of development by which each could be a lesson to the designer of the successive building instead of each problem being handled as if no such similar case had ever before arisen.

THE Grand Central Terminal plans are progressing slowly to a point where the epithet "grand" even in this day of enormous buildings, may not seem an overstatement. At the present time the desire of the architects, Reed & Stem and Warren & Wetmore, and of the New York Central Railway, seems to be to construct not only a station, but a plaza behind the station which shall be flanked with buildings of semi-public character. The first of these is the Grand Central Palace (Plates LXXXIII and LXXXIV). The purposes of the old building have never been fully understood by me, for beside the exhibition hall or great assembly room, rivalled alone by Madison Square Garden in this city, it combines a number of offices, both for private individuals and associations; and while the old structure was in its day something of a wonder, at the present time it seems only fit to be removed. The new building which has taken its place has recently been opened and is a dignified and monumental thirteen-story office building with a frontispiece on Lexington avenue indicative of its auditorium feature. This frontispiece by the way would seem a most excellent treatment for a theater front, and beautiful as it is in itself does not seem to tie in as well as could be wished with the remainder of the building. The two upper stories of the building are combined into a single motive with a loggia of attractive design and the whole surmounted with a broad over-hanging cornice by means of which the great difficulty in a high building, the cornice, is fairly happily solved. In other words, by its projection and color it is made sufficiently strong to crown the entire structure, while in detail it is light enough not to appear ridiculous over the comparatively small columns of the two upper stories. The treatment as a whole is of that modern style probably derived from French school architecture which seems to be the only type of office building in which we are making any progress, and is one which in some of its manifestations is pretty wide spread throughout the country.

Of course, the tracks immediately in the foreground will eventually be covered with another building of similar character to that of the present one, and the appearance of frail foundations so evident at the present time will be done away with. This building brings to mind, in its present conditions, the question so constantly raised by writers in the general magazines as to whether a steel building should not express more strongly its structure, and yet every steel structure is compelled by the Building Code, and very properly, to be enclosed in masonry of some sort. This is here kept down to as light a shell as possible and while the treatment of the base unquestionably recalls its prototype in a purely stone building, its use is correct since for a good many years at least the mind will not be able to accustom itself to a building in which the structure of the base is not emphasized.

MR. GEORGE B. POST, now perhaps the Dean of our American architects, has associated with him two of his sons, while a third, whose business is not that of an architect, lives near him at Bernardsville. The houses for three of the family are illustrated in this copy of ARCHITECTURE (Plates LXXII, LXXV and LXXX), and it is very interesting to see how cosmopolitan are the ideals of our architects in the matter of homes, even in a single family. The residence of George B. Post, Jr., is of English character, worked out in stone and terra cotta with considerable ornament, and some very interesting features. The quality of the stone work is, in my opinion, somewhat too rough for such close connection with the smooth surface of the terra cotta, but the individual features of design are of marked excellence. The main entrance, with the Tudor doorway surmounted by a broad bay window and gable and flanked by a pair of small octagonal buttresses, is a dignified and satisfactory approach, while the main garden entrance, with the tremendous grouped window of the stair landing, is also good. The details of the two-story bay window and the piazza adjoining deserve attention, and the chimneys, although perhaps not departing very far from traditional forms, are most excellent pieces of design.

The house of Wm. Stone Post is about as different from the Geo. B. Post, Jr., house as could be conceived and represents perhaps the highest type of excellence evolved purely from American sources. Mr. Post has evidently studied with much care the Colonial and early nineteenth century work and for his motive has used the most agreeable of forms used by those builders, a high central mass with two lower wings, these again flanked by pavillions. It is a motive which is common to the three famous old Annapolis residences and to many of the Georgian houses in Virginia and Maryland. Like the builders of those houses he has gone straight to the simpler classic forms for his detail and with a result that is exquisitely refined, most picturesque, and eminently suited to its setting.

Mr. George B. Post himself has chosen the style of somewhat broader possibilities, in keeping with his position in the architectural world, and his wide experience. In mass, his house is perhaps not so agreeable as either of the others, but the superb detail and the interesting semi-circular porch make it of great value. It is curious to find three houses of so high a quality of design and of such marked points of difference, worked out in the same office for people of the same family, and yet probably each seems to its owner the most perfect exponent of modern American life.

THE Paterson High School, W. T. Fanning architect (Plate LXXXII), is of a somewhat more sober and dignified style than many other of our schools where the necessity of great light area has interfered too greatly with conservative design. Of course, any building with as little wall space as is necessary in a school building, is always an exceedingly difficult problem, especially as in many cases where the school authorities require light on one side of a room only, a wall surface almost entirely of glass is placed in juxtaposition with one entirely of masonry. This is a condition very difficult to meet, and in meeting it our architects have often thought it necessary to step out of established traditions and to endeavor to develop a new style. Where this has been done with reminiscences of Tudor architecture the result has been sometimes very successful; where the heavy Classic cornice has been retained, the combination has become, in appearance at least, an impossible one. In the Paterson High School, the plan of which is a block, with an interior court, the architect has found it readily possible to arrange such rooms on the corners as might have light on more than one side, while retaining the class rooms in the intervening space. He has, therefore, been enabled to treat his building in a uniform style completely around it and with a result, which though perhaps neither extraordinarily brilliant, nor remarkable for purity of style, is at least a sensible, sober and agreeable design, in which are employed the usual traditional features in an excellent traditional way. The building is flat roofed, and the architect has sensibly enough made no attempt to conceal this, for he has used his orders as decorative motives only, on the front four pairs of columns in antis, on the side a pair of columns and antis at each end. These decorations mark the entrances and achieving this end sufficiently make little attempt to explain which is the front and which is the rear of the building. This, which in most buildings would be a fault, in a building of the school type, which is equally entered from all four sides, is rather the contrary; and while the public entrance is placed below the largest decorative treatment, it is merely a door of the same size as the other entrances, this properly enough since it is quite the least used, although in a way the most important.

It will be no news to any architect that school buildings require approximately equal light in every story, and this disposition of window openings is most difficult to treat and form a complete and satisfactory façade. In this particular building the base has been weighted a little beyond the upper two stories with the window openings kept the same size, but has not been so strongly treated as to make the inclusion of large windows seem forced. The design is on the whole well reasoned and satisfactory. The plan differs in few respects from the usual block school house one, the corridor arrangement is very simple and effective and the lighting in the class rooms is, in most cases, excellently disposed; the auditorium includes the possibility of ample fire and emergency exits and should be well lighted by natural light. The entrance vestibule has enough architectural treatment to specify the instinctive preference on the part of our public for being treated a little better than their children as they enter the school building, and the auditorium, starting with a rather unusual and attractive treatment, has a beamed ceiling not in thorough harmony with the vaulting arrangements and with beams so narrow as to be distinctly unpleasing. This is, however, a comparatively minor detail, and a careful study of the plans and elevations fail to disclose anything but a logical and well balanced plan enclosed in a most attractive exterior.

The building is lighted throughout by electricity, and heated and ventilated by a complete plant supplied by three boilers. The class rooms are supplied with fresh air through flues built in the walls of reinforced concrete; and connected to a main duct constructed in the basement ceiling of hall ways, through short galvanized iron connections, each adjusted by dampers. The exhausted air is discharged above the roof through ventilators. The main fresh air ducts are supplied by two fans operated by engines, and the waste heat from the engine exhaust is utilized in warming the air supply. The auditorium is supplied with fresh air through separate flue extended back of stage into attic space, and delivered through the plaster grilles in ceiling, the exhausted air passes through bronze registers in the pilasters at each side into attic ducts led to ventilators on the roof. Each of the vent and main supply ducts is controlled by automatic damper operators in the engine room.

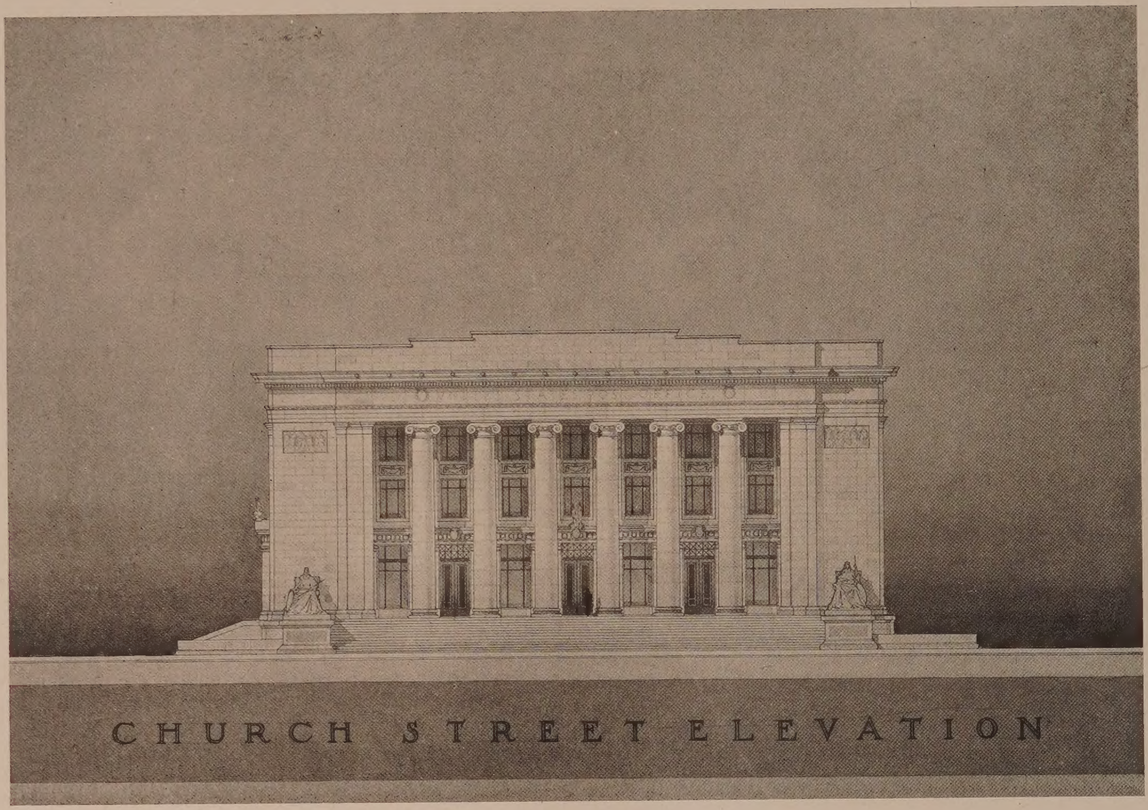
The heating is done by steam radiators placed in all rooms, and controlled by thermostatic regulation. The blowers are arranged to be operated in summer by a motor when the boilers are not in use. The cleaning is done by a vacuum cleaning system operated by an electric motor.

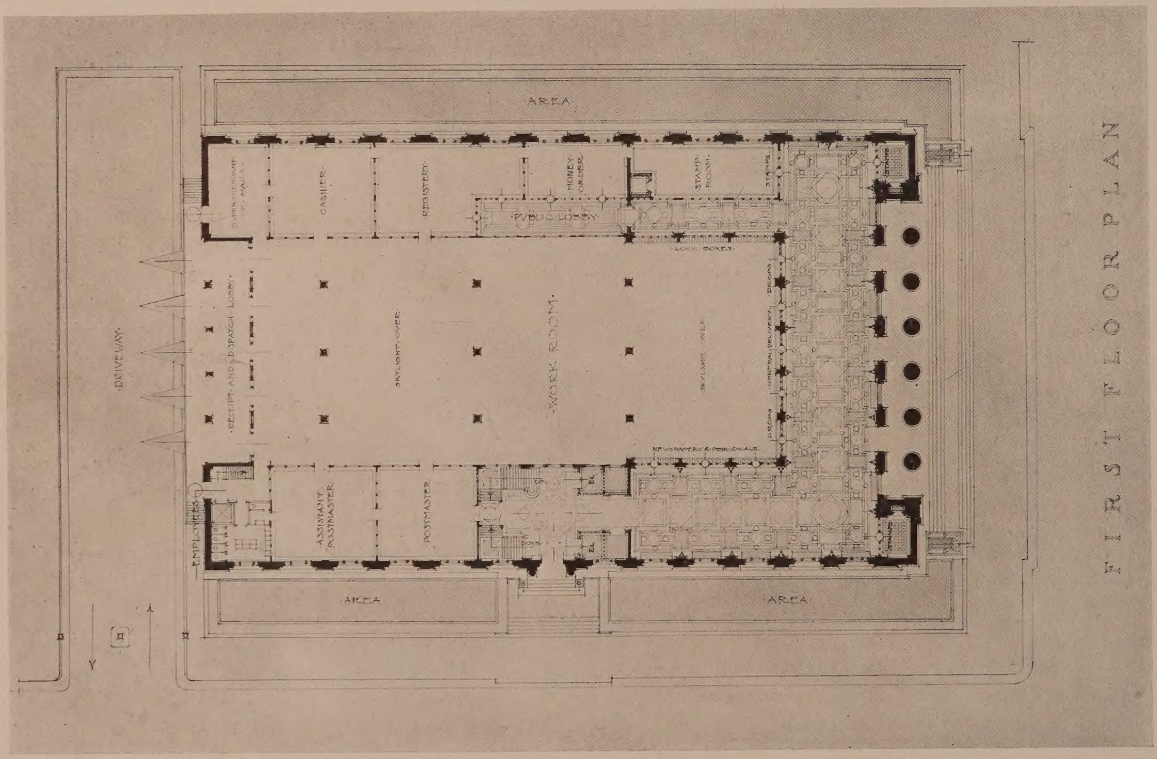
The entire equipment was designed to operate with the maximum efficiency at minimum cost, by Mr. Thos. Barwick, consulting engineer for the architect.

AMERICAN ARCHITECTURE.

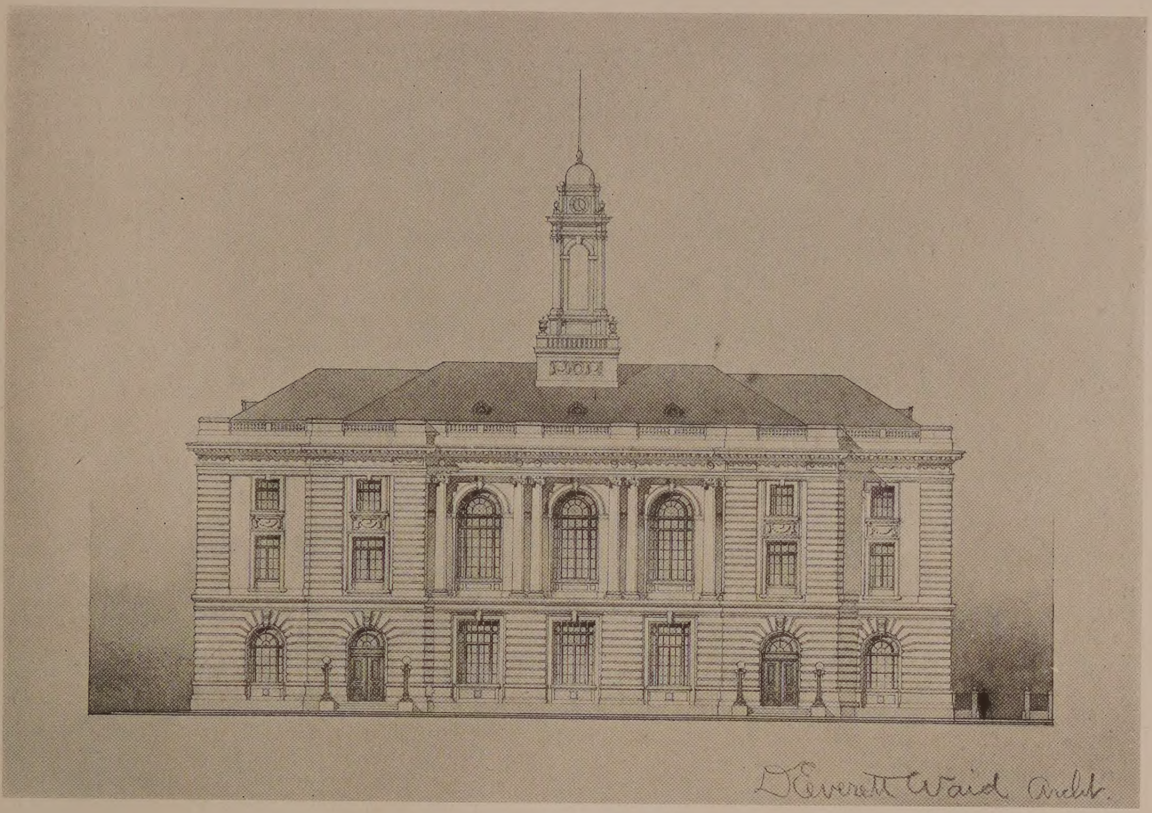
IN a discussion which followed the reading of a paper last month on "American Architecture," by Mr. Andrews, before the Royal Society of Arts, the chairman, Sir Aston Webb, said when he was in New York he did not think the American architects were themselves quite sure as to the possible final success of those buildings, and they were always asking Europeans what they thought of them. He never felt any hesitation in declaring that he thought them extremely fine, though he believed the Americans to whom he said it sometimes thought he was chaffing them. The effect

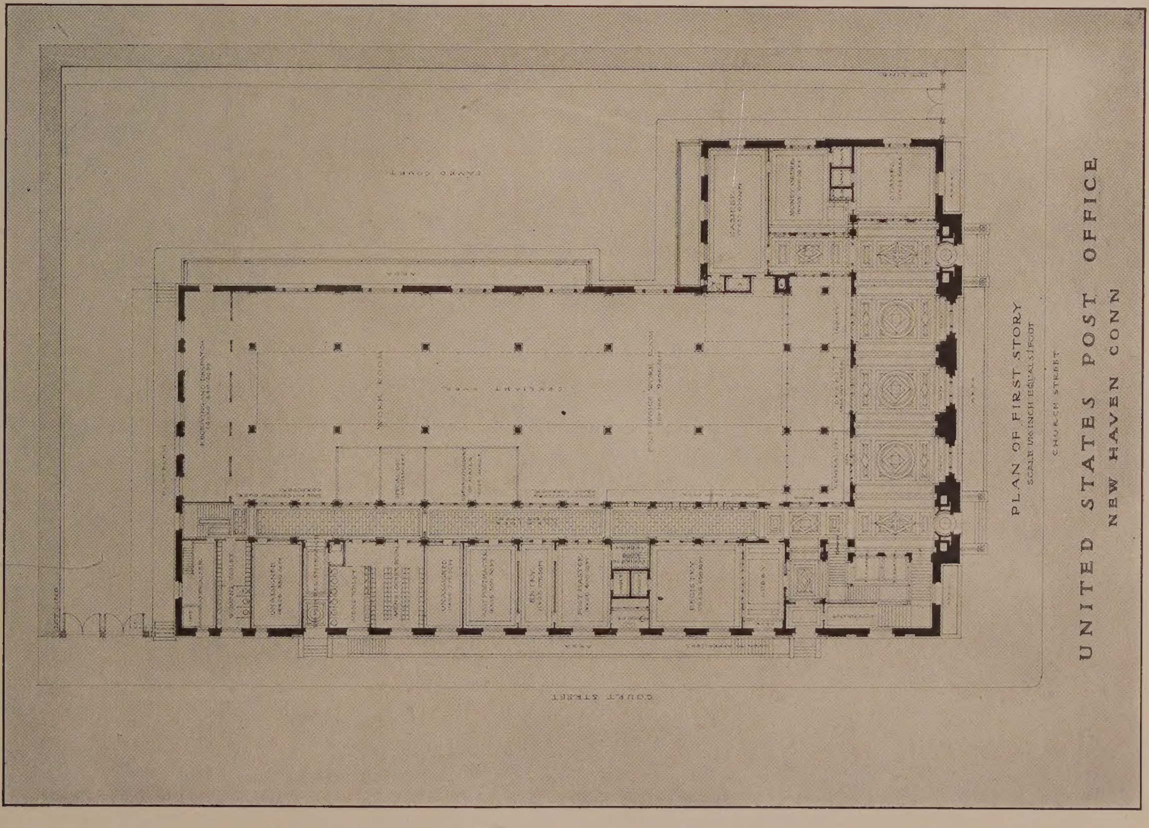
(*Continued page 123*)



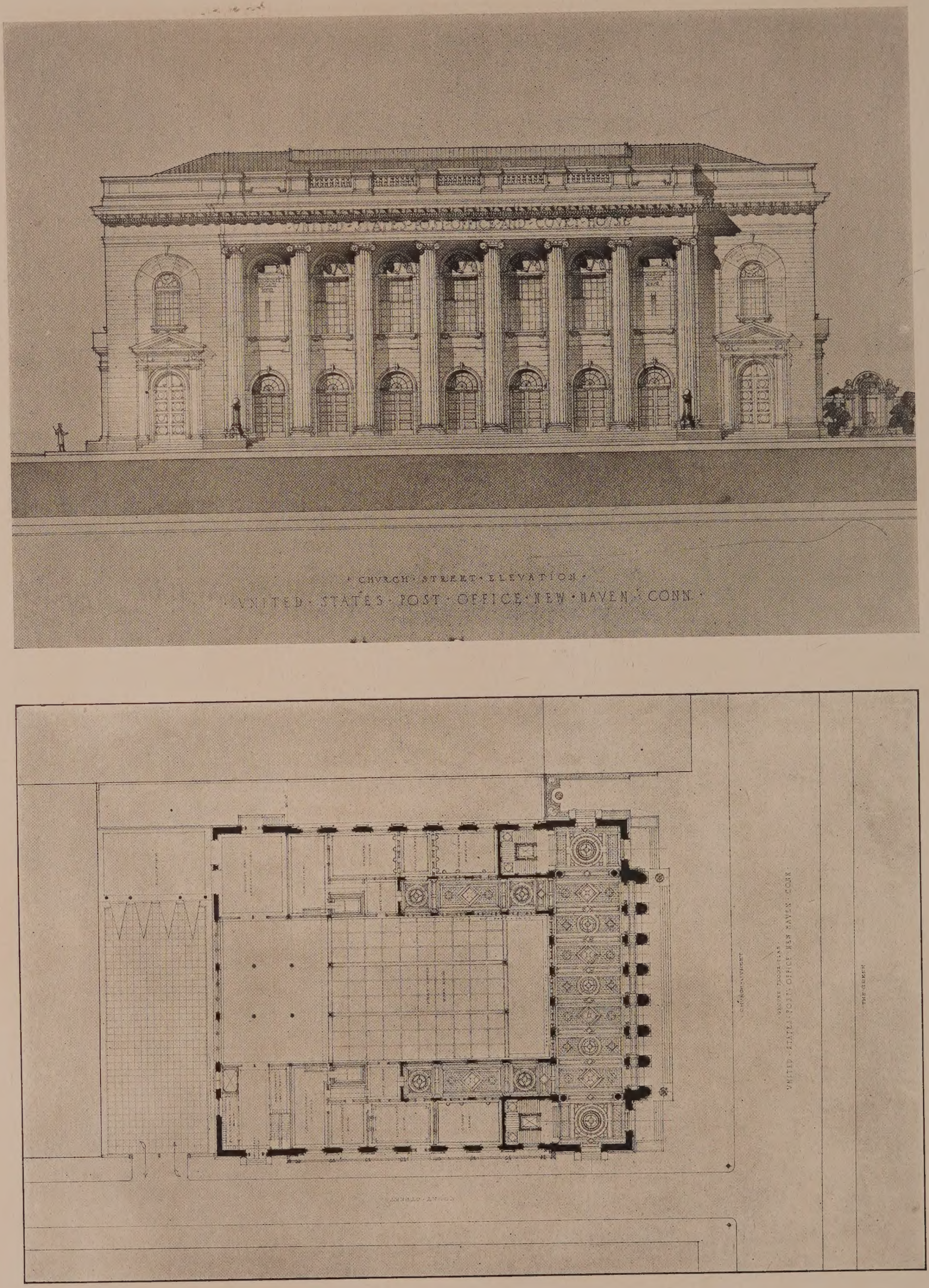


COMPETITIVE DESIGN AND PLAN, U. S. POST OFFICE, NEW HAVEN, CONN. Placed II. Geo. B. Post & Sons, Architects.





COMPETITIVE DESIGN AND PLAN, U. S. POST OFFICE, NEW HAVEN, CONN. Placed III. D. Everett Waid, Architect.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CHURCH STREET
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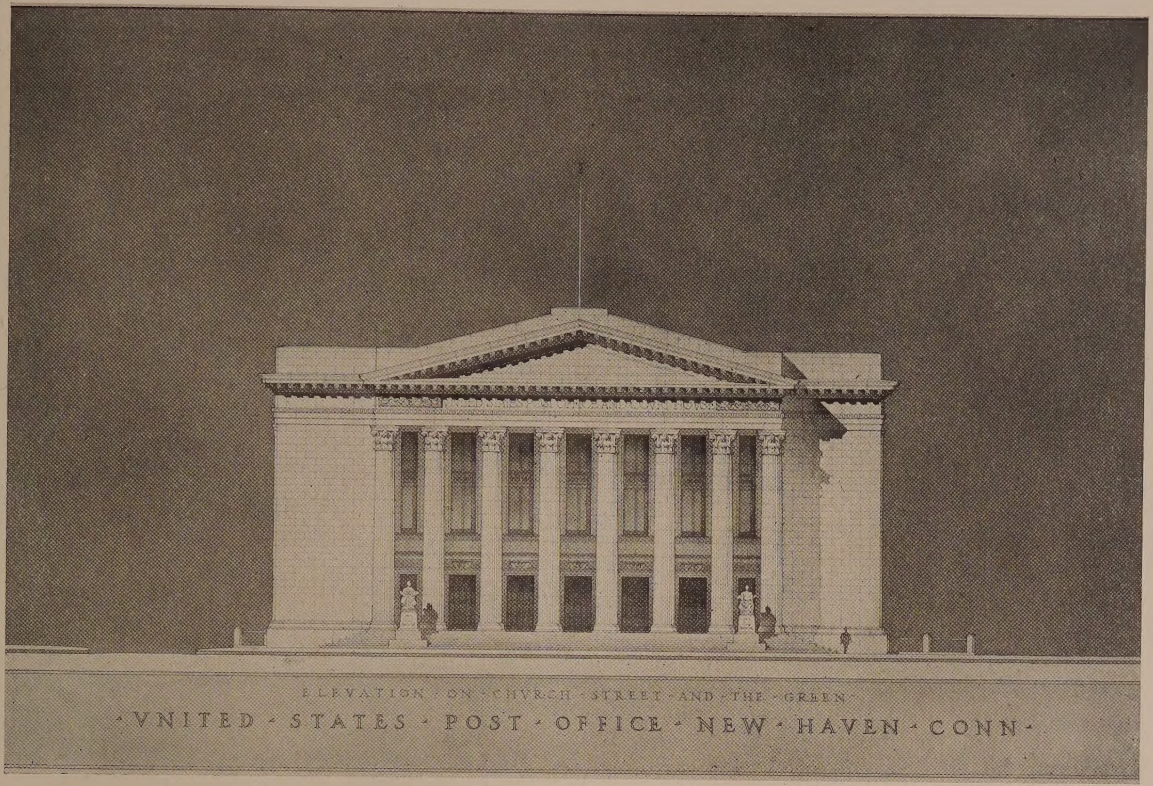
THE GREEN

COMPETITIVE DESIGN AND PLAN, U. S. POST OFFICE, NEW HAVEN, CONN.

Howells & Stokes, Architects.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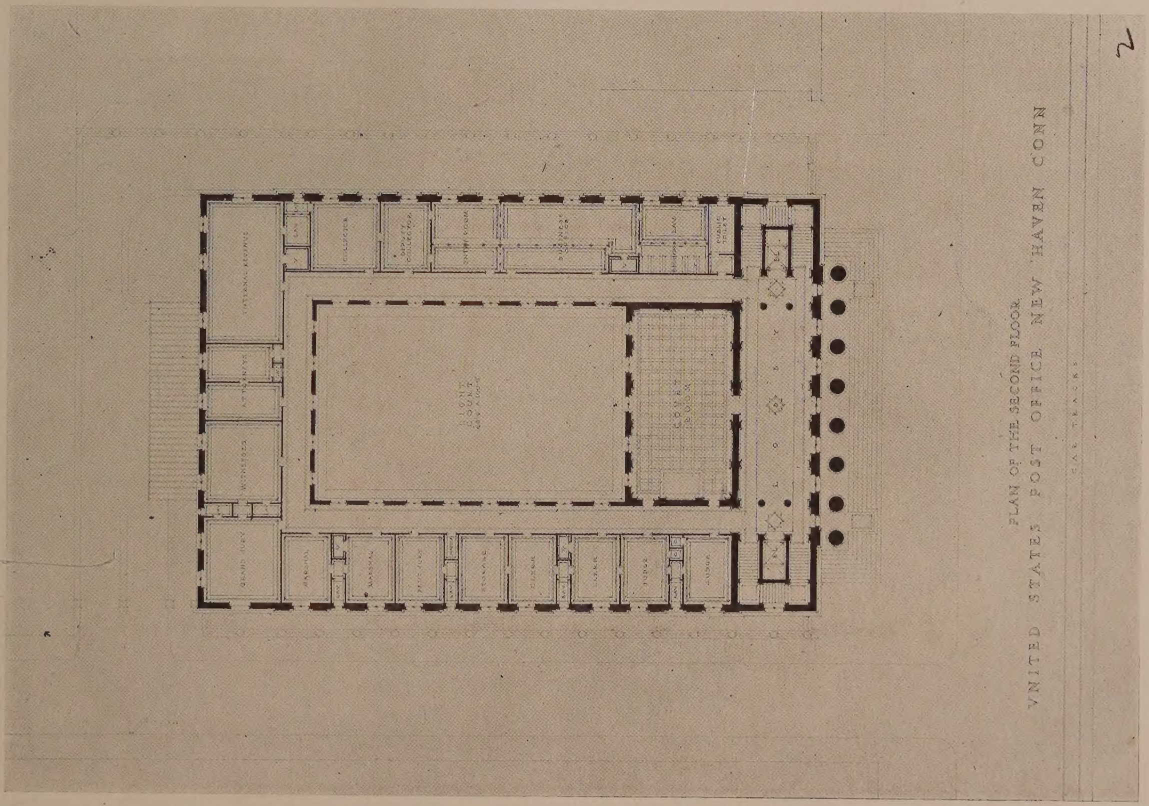
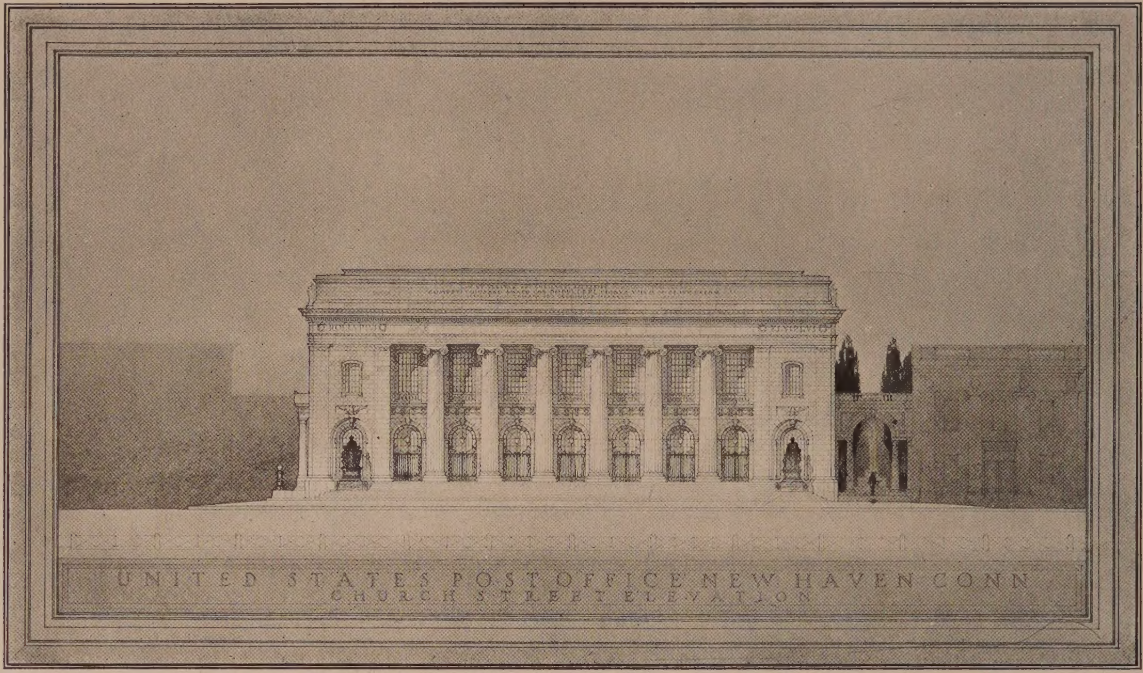
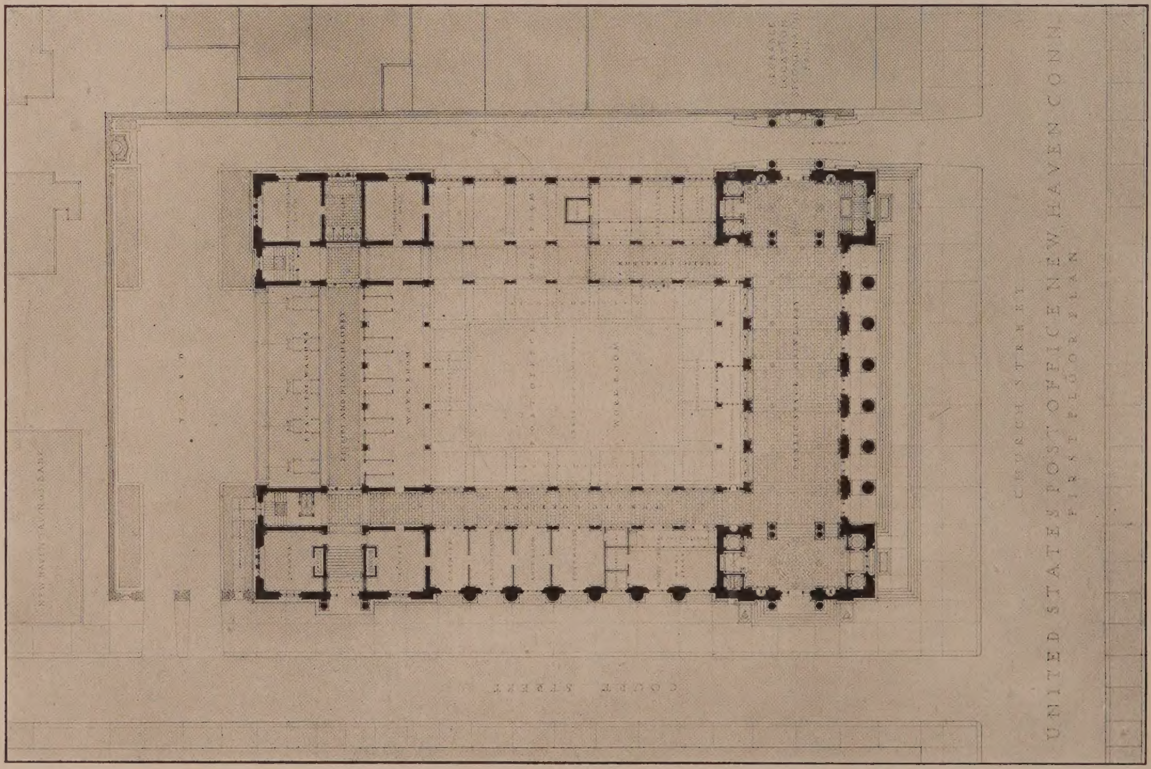
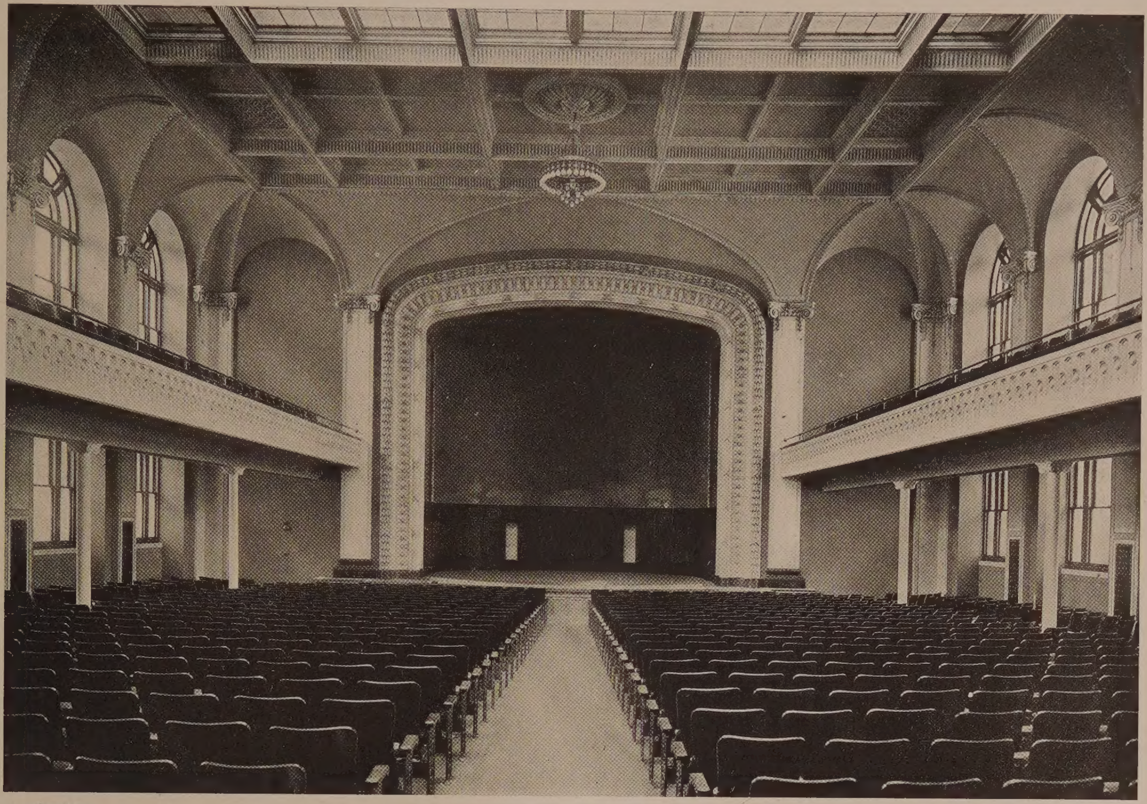


COMPETITIVE DESIGN AND PLAN, U. S. POST OFFICE, NEW HAVEN, CONN. H. Van Buren Magonigle, Architect.

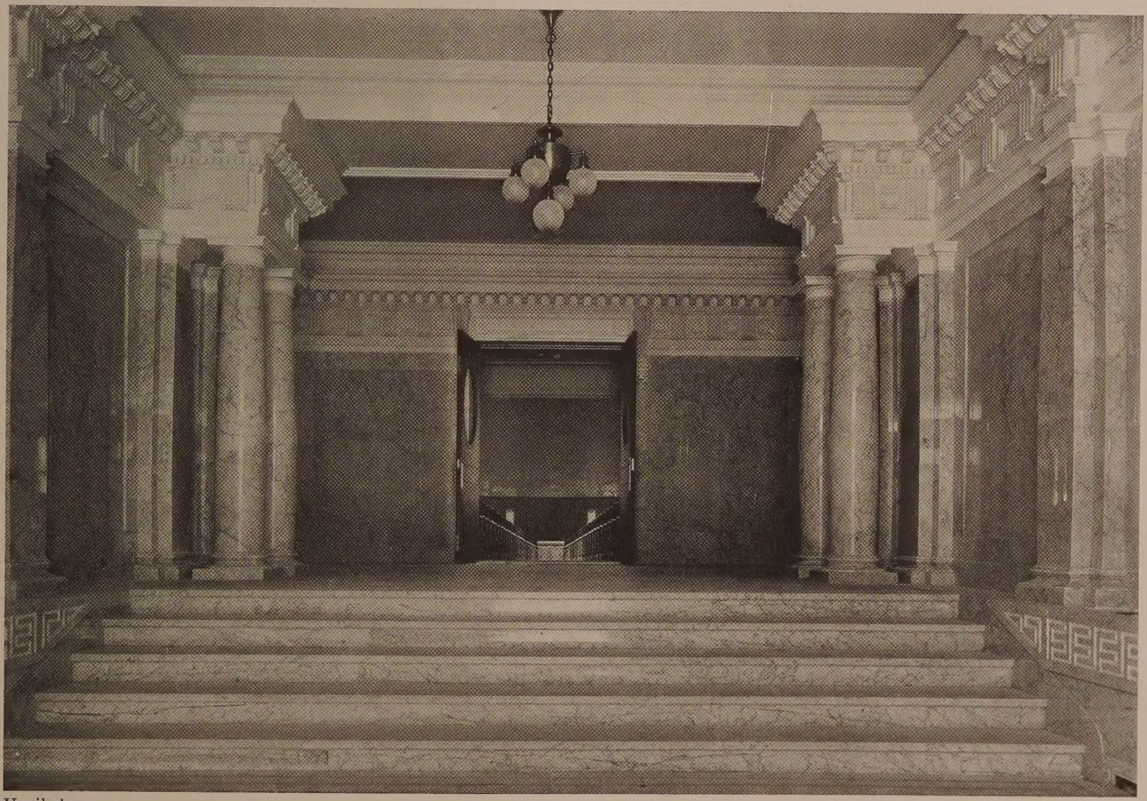




COMPETITIVE DESIGN AND PLAN, U. S. POST OFFICE, NEW HAVEN, CONN. Tracy, Swartwout & Litchfield, Architect.



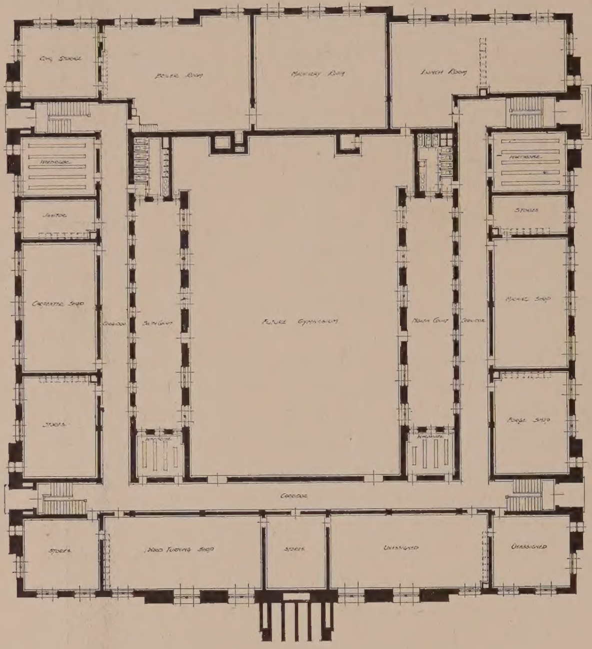
Auditorium.



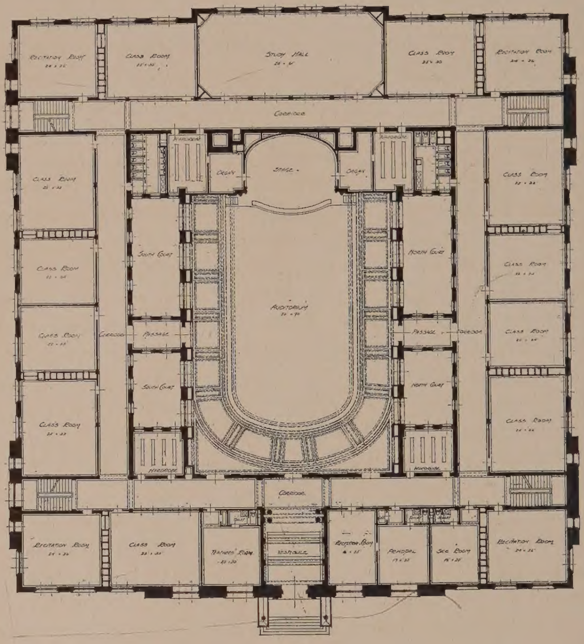
Vestibule.

INTERIORS, HIGH SCHOOL, PATERSON, N. J.

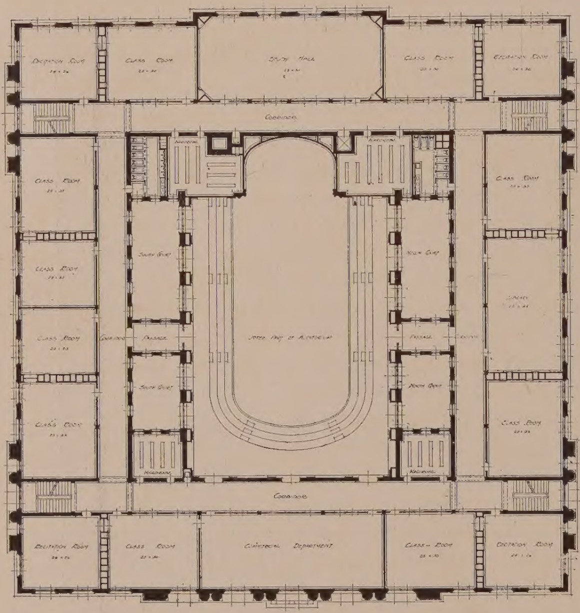
W. T. Fanning, Architect.



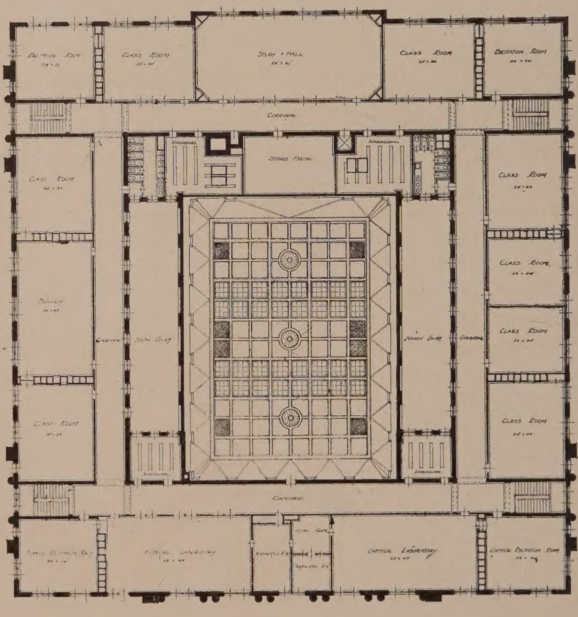
BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

PLANS, HIGH SCHOOL, PATERSON, N. J. (Plate LXXXII). Wm. T. Fanning, Architect.

(*Continued from page 115*)

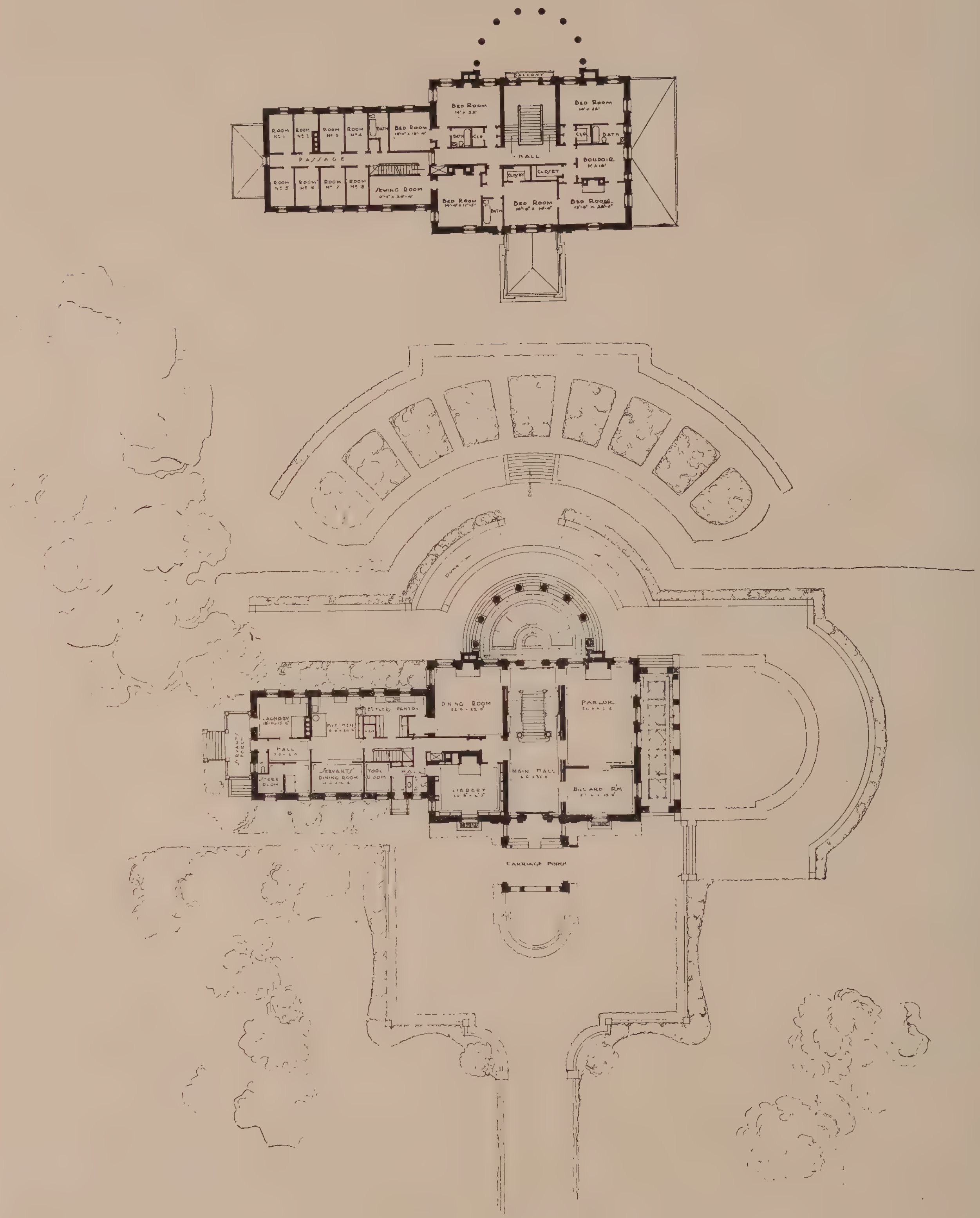
upon him was very strong, and when the streets were full of them, and there was an aspect of greater cohesiveness, it would be better still. But when he was there, the tall buildings were only occasional, so that the effect was somewhat "jumpy." Looking down town in New York at that date reminded him very greatly of the streets of Genoa and of other of the older Italian towns. The New York streets were wider; but the buildings being higher, with the overhanging cornices there was produced the same effect of deep shade at the bottom, and brilliant light on top. Fine as one thought such buildings out there, he did not think our admiration for them would enable us to imitate them in England —our atmosphere and our requirements seemed so different. But it was important to note how keen was the interest taken by the American public in matters architectural. Here the public did not generally take much interest in those matters, and the reason might be that Americans had had that new problem to solve. Our problems had been settled, and most excellently, in days gone by, and at present we were somewhat nervous about trying new ones. In America, architecture was a topic of public conversation, and one could hear comments upon the beauty of design of the buildings. That was, naturally, a great encouragement to the artists working in brick and stone, an advantage which Britishers congratulated them upon possessing. Another advantage was the unified action in that country; they were all working on the same lines there, though not necessarily on the same style; sometimes they used the Gothic, sometimes the Classic, but the buildings were so huge that the detail in them was a comparatively small matter. The buildings were designed with the idea of great effect, a great base, a great shaft, and a great cap; and each was trying to bring about the same effect in his own individual way. That was an advantage which was seen in all countries in the world in the matter of architecture. In Greece, for instance, they worked together on the same lines, and they achieved success; and so in Rome, and in the Renaissance, and in the English Gothic. When working together with the same aims, success followed, which showed that architecture was an associated art, and that a copyright bill was scarcely necessary or desirable for architects. What was required was that they should assist one another by their examples, and thus by degrees develop something which should be not only satisfactory to themselves but should bring honor and repute to the countries in which the buildings were placed. The history of our country was largely built in its architecture, and the history of America was now, he thought, being largely, nobly, and grandly built by American architects. He was, therefore, sure that the meeting would join with him in congratulating Mr. Andrews and the American people on the magnificent opportunity they had. When he (Sir Aston) was in New York, Mr. McKim had just finished the library for Mr. Pierpont Morgan, one of the most refined buildings, of ordinary size, which he had ever seen. A New York City man told him that constantly on going down town he went out of his way for the pleasure of going down the street to look at the elevation of that library—a very strong illustration of the effect which architecture might have upon the individual. He had the pleasure of meeting Mr. Cass Gilbert, whose very fine buildings the lecturer had shown on the screen. There was one omission in the slides, and that was an indication of what buildings were designed by Mr. Andrews himself. If he showed any of them, he did not say which they were, a piece of information he was sure they would be glad to have.

Mr. H. H. Statham, F. R. I. B. A., said although he knew the position of Manhattan Island led to the crowding of the ground, he was not aware that the resulting buildings had been accepted as the type of American architecture. He admired those buildings, and he agreed that they were the natural outcome of the conditions; but it was impossible not to feel some dissatisfaction with the idea that they were buildings of which the whole exterior more or less imitated a construction which was not the real construction; and if that system of building tall steel buildings was to be made architectural, there should be some effort to resign the exterior so that it actually conveyed to the mind that it was only steel; that it should avoid giving the impression that it was an imitation of a stone structure. Was it possible to carry out these high buildings in ferro-concrete, instead of with a stone skin, so that the exterior should represent the actual construction? Pictures had not been shown of very high buildings in concrete steel. To Europeans, who had been accustomed to regard architecture as buildings in stone and brick, the idea of the outer skin went against one's prejudices. He had the feeling that he would like to see the exterior aspect of a building represent its actual construction. His own feelings had been, in regard to many of the buildings illustrated, that the base, from the architectural standpoint, was not strong enough. Probably that was also a question of light, but if larger piers were put in the basement it would have a better effect. What had been said about the influence of tradition in American architecture was very interesting. He thought American architects had given themselves over too much to the cult of the Beaux Arts, and that if they would try to evolve a style of their own it would be well. If one adopted the general feeling of Classic forms, one might put something into them which was in harmony with them, and yet not necessarily copying.

Mr. John Slater, F. R. I. B. A., desired to endorse what had been said as to the interest of the paper. Three years ago he went to New York, and he felt what Mr. Andrews had said as to the imposing effect of the high buildings when seen from the river. The fact that the gaps between them were now being filled up was a very good feature, because to stand in one of the narrow streets and look over a low building was some of the most depressing things which could be imagined.

With regard to some of the pictures shown, especially of the purely utilitarian structures, he thought a sufficient attempt had not been made to emphasize the corners. One building was rather alarming to look at because of the thinness of its corner. Notwithstanding the necessities of lighting, if those structures were to be put up, it might be possible to give a little more apparent strength to the corners. It was very interesting to hear about the stimulus towards the artistic appreciation proceeding from the artist to the patron. He feared that the patron in America gave more fertile grounds for those stimuli than in this country, but there could be no doubt, from what was known about the spread of architectural education in the States, and the way in which the various colleges and municipalities were providing for the proper education of art students, that the

(*Continued page 125*)



PLANS, COUNTRY HOUSE, GEO. B. POST, BERNARDSVILLE, N. J. (Plate LXXX).

Geo. B. Post & Sons, Architects.

(*Continued from page 123*)

intelligent appreciation of architecture was greater in the States than here, and that was a matter upon which the Americans were to be congratulated, while we must deplore the lack of it in ourselves.

Mr. Andrews, in reply, expressed his warm appreciation of the way in which his paper had been received. He hoped that when next his hearers saw anything which pertained to the work of the United States, the paper would help them to understand what it was that had caused it to be, with all its faults—and, he hoped, some virtues—what it was, and the directions in which the country was tending. He would not wish these high buildings put in any part of Europe, because they had nothing to do with their conditions or mode of life, and they would be an entire misfit. They belonged to America, and were not freaks. The freakishness would be eliminated from them by educating the landlord and the public, when the former allowed the corners to be made wider and to occupy more space.

MODELS AND THEIR VALUE IN ARCHITECTURAL PRACTICE.

WHILE models of very important buildings, and of monuments or memorials in which figure-sculpture is largely introduced, have been, and still are, occasionally prepared, to enable the persons interested in their erection to properly judge of their appearance when executed, the every-day value of models, either of a temporary or a permanent nature, is not generally realized by the architectural profession, says Berthold Audsley in the London *Building News*. This want of appreciation is much to be regretted, for were models more frequently resorted to, as object-lessons, there would be fewer mistakes made in the proportions and grouping of parts, and in the character and association of details. Perspective drawings may be more or less truthful, but as a rule are misleading, especially so when artistically colored and enhanced in attractiveness by the addition of effective surroundings, which exist in the artist's brain, and never can exist in the locality of the building when erected. Further, well-dressed ladies and gentlemen, dashing equipages, prancing horses, and other artistic "properties" are introduced with lavish brush by the well-paid artist, who is instructed to produce a "taking picture." Such a picture is depended upon by the architect to secure the approval of his design by the client, who is, generally speaking, little versed in matters architectural; and who is, accordingly, unable to divest his eye of the glamor of the artist's cunning, and come down to severe criticism of the architect's design, even should the architect have been careful to show sufficient detail to enable anyone to form a correct idea of what the work will look like in hard stone or brick. Again, be it said, a perspective shows a building from only one, and usually the most favorable, point of view, and under such a condition displays two of its sides only. It is, accordingly, an insufficient exponent, even if it is a fairly truthful one, of the architect's conception.

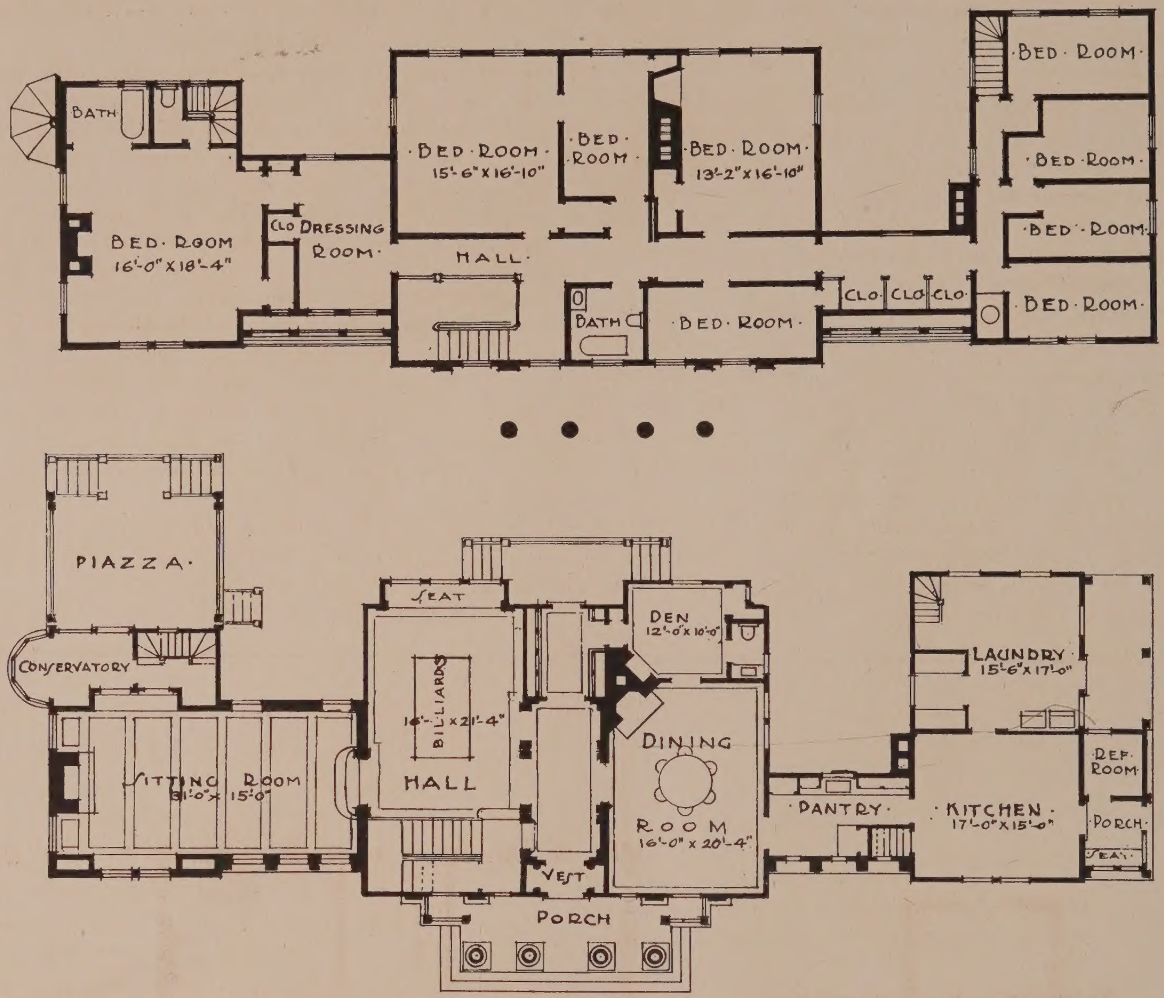
A model, on the other hand, if properly made to scale and carefully detailed, in strict accord with the architect's design, is an honest statement of facts which cannot mislead anyone, even though he may be quite unskilled in architectural composition and treatment. From it the client can form an accurate conception of the structure the architect proposes to erect for him, and approve or disapprove with assurance, to the avoidance of any ultimate disappointment. What is of equal importance, perhaps: such a model will effectively show the architect, before it is too late to remedy it, where any weakness obtains in his design, either in comparative proportions or in the grouping of parts when viewed from different points—such points as the building, when erected, would be invariably seen from. Should everything appear right, both the client and the architect will be satisfied that the building will be a successful work so far as its external treatment is concerned. Such an assurance can never be positively arrived at from the inspection of an ordinary perspective or from geometrical drawings.

There are different classes or grades of architectural models, which are made to meet certain requirements, and which vary considerably in the labor necessary for their fabrication, and also, to some extent, in the materials called for in their construction. The more distinct and important of the classes alluded to may, with advantage, be briefly described in the present article.

The first and simplest class of architectural models embraces those which may be properly designated block models, for that term conveys a correct idea of their simple form or treatment, which merely shows the several main portions of a building in correct proportion and position with respect to each other, but which dispenses with all subordinate features and ornamental details that exercise no influence on the massing or grouping of the main portions. A model constructed on such lines, bald and uninteresting though it may seem, is extremely valuable in enabling the architect to judge correctly how the several leading elements of his design will accord with each other; and to learn with certainty in what manner they will group, artistically or otherwise, when viewed from the chief and inevitable points of sight. Every experienced architect knows how very different such a feature as a tower, constructed with stages of varied forms, appears when seen from different points of view, and it can be safely surmised that numerous towers and spires that have been erected in modern times would have assumed more artistic and pleasing proportions and treatments had they been tested by correctly-made models prior to construction.

Block models are valuable as object-lessons in other directions, and notably for developing and critically examining complex and unusual roofing problems. Models for this purpose, being of a temporary character, can be easily and quickly made, and they so clearly solve all difficulties in formation, and show where any weakness or awkwardness obtains that the architect can quickly reach a satisfactory decision in all questions at issue. The best—and, indeed, the only—material necessary for the construction of models of this first class is stout cardboard, such as is used for mounting drawings or photographs. The several pieces required have to be accurately drawn and cut, and put together with a thick solution of gum-arabic. The models can be left in the white cardboard or painted in any desirable manner.

At this point we may properly enlarge somewhat on the great advantage of employing cardboard as the chief material in the construction of architectural models. It is superior to every other material when correctly handled. It is more durable and trustworthy than either wood or plaster; for in the first place, when properly put together and protected by shellac varnish and oil-paint, it defies



PLANS, COUNTRY HOUSE, W. S. POST, BERNARDSVILLE, N. J. (Plate LXXIII). Geo. B. Post & Sons, Architects.

the action of both hot dry and moist air—a thing no wood can do for any length of time. On the other hand, it can be more accurately and sharply shaped in all the usual architectural details, including the most complex moldings and pierced and tracery work, than is practicable in either wood or plaster. Its use involves no objectionable mess, and this certainly cannot be said of wood or plaster work. It requires no complicated tools or molds; for, beyond the usual drawing instruments, a knife, a few punches, a steel straight-edge, and a simple circular cutter, no other tools are necessary: for simple models, and for the chief work in all models, however large and elaborate, the knife and straight-edge are alone called into play. The cardboard is best cut upon a piece of glass; and all large flat pieces, when gummed together, are most effectively pressed between pieces of thick plate-glass, while the smaller details are conveniently pressed under flat marble or lead weights.

The second class of architectural models include all those that are made on purely suggestive lines, and are only sufficiently detailed and otherwise treated to convey a general idea of the dimensions and architecture of the buildings represented. Models of this class are useful for the purpose of showing, in an effective manner, arrangements of buildings and other features in town-planning schemes and local improvements, and for conveying correct ideas of the grouping of detached buildings, such as are common in large industrial institutions, hospitals, colleges, and suchlike.

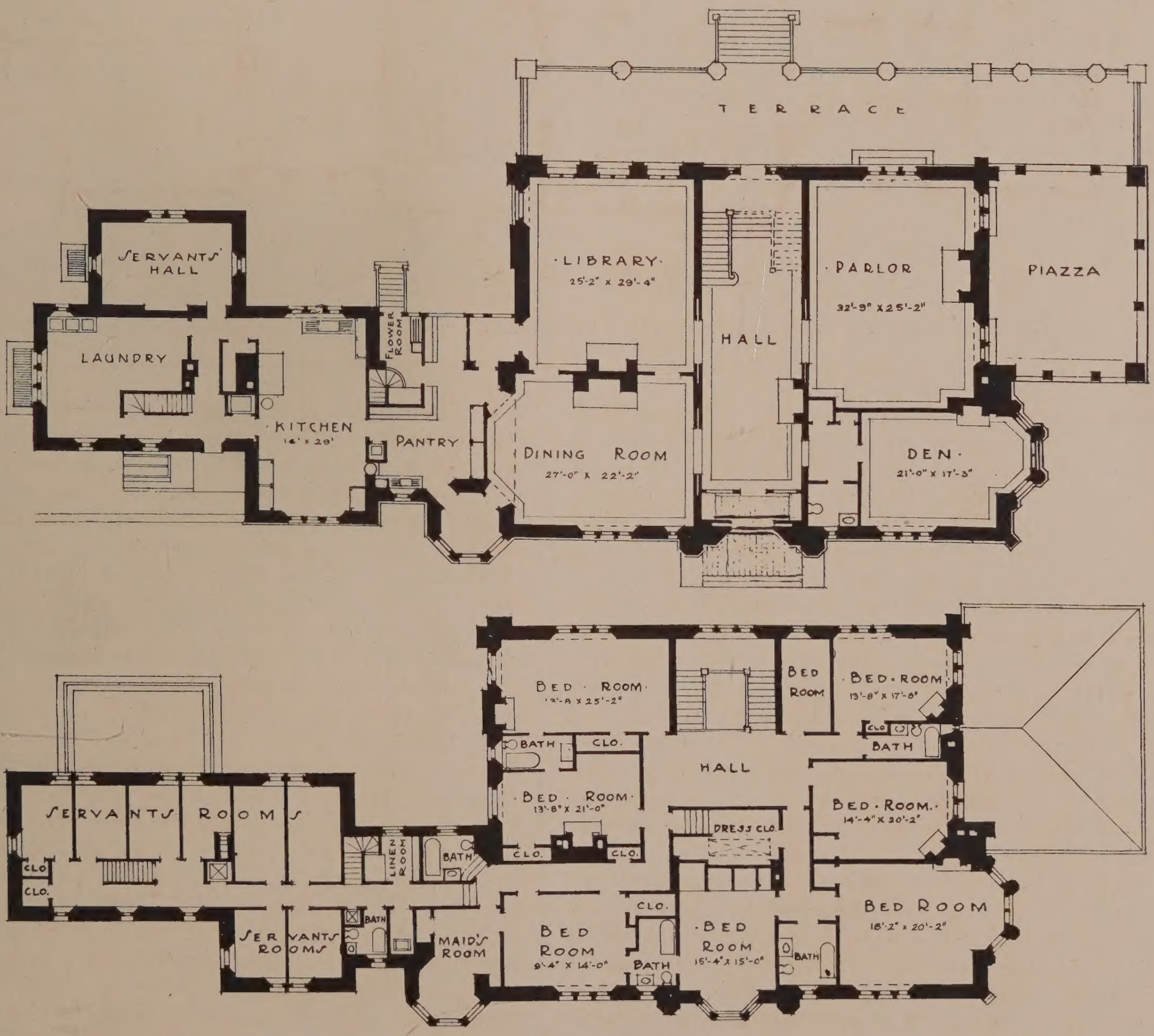
Models for the purposes just named can, as a general rule, be made almost entirely, if not entirely, of cardboard; wood, for instance, being used for columns, vases and any other details which can be easily formed in the turning-lathe. Great elaboration in any direction will be unnecessary; and ornamental or carved features need only be represented in a very simple and sketchy manner, involving little labor in their execution. It is a very common thing to see in models, now frequently made by hands understood to be skilled, the greater part of the architecture merely drawn or painted on perfectly flat surfaces. But there is no necessity for this make-believe method to be followed by the modeller endowed with moderate skill, who, instead of drawing or painting the doors, windows, and their associated or other details, will render all-important architectural features with their proper recesses and projections by the aid of his knife and other simple tools. A model so made is a very different thing from that which is practically a block model, presenting flat surfaces treated to imitate sunk and raised work. It is as easy for the skilled modeller to cut out a door or window opening, and otherwise finish it in a sufficiently expressive manner, as to carefully draw and color it on a flat surface, so as to convey the idea of depth and projection.

We have now to speak of models of the third and most advanced class. These may be properly designated art models, being constructed with an accuracy as absolute as skill and materials can attain, and with the view to permanent interest, or for museum or exhibition purposes. Such models demand the greatest care and attention to detail throughout their formation, and the proper use of numerous materials, which are not only beyond the power of cardboard and paint to successfully imitate, however cunningly manipulated, but are eminently desirable in themselves. The materials alluded to include polished marbles and granites, certain forms of metalwork, stained glass, mosaic, choice woods—ornamentally worked or turned, or inlaid to represent parquetry (to proper scale)—and electric lamps (of proper size, and chiefly for interior models). Notwithstanding the introduction of these adjuncts, cardboard must remain the dominant material if the model is to be lasting and in every way satisfactory in its character.

NINTH INTERNATIONAL CONGRESS OF ARCHITECTS.

THE congress is to be held in Rome from the 2nd to the 10th of next October, according to arrangements made with the permanent committee in Paris, for international congresses. It was agreed at the congress of Vienna that this meeting, the ninth of its kind, should be convened in Rome on the occasion of the festivities in Italy, organized to commemorate the fiftieth anniversary of the proclamation of Rome as capital of the kingdom. By kind permission of the Syndic of Rome the congress will be inaugurated in the historic hall of the Horatii and Curiatii. The following subjects will be considered:

1. Reinforced concrete, the mode of using it in different countries, and how it may be applied to great buildings both as regards the technical and the decorative point of view.
2. Duties and rights of the architect with regard to his employer.
3. The technical and artistic education of the architect and the architect's diploma. The exercise of his profession beyond the limits of his own country.
4. Considerations as to modern architecture.



PLANS, COUNTRY HOUSE, GEO. B. POST, JR., BERNARDSVILLE, N. J. (Plates LXXV-LXXVIII). Geo. B. Post & Sons, Architects.

5. The carrying out of architectural works for the State or other public bodies.

9. The desirability of a dictionary of comparative architectural terminology.

7. Foreign academics in Rome (history, course of study and works of the pupils. Their influence in their respective countries).

Written communications and lectures are admissible on the following subjects: "Plans for the laying out and aesthetics of towns"; "Building regulations."

The committee will be extremely obliged to all those who will furnish written articles on the above subjects, to be sent in before the 15th of August next, accompanied by a summary in one of the four languages to be employed in the discussions of the congress, viz., French, English, Italian and German.

In every country the sections of the permanent committee for international congresses, or failing such section, a representative to be hereafter named, will receive the applications of those desiring to become members. Applications for membership in the congress should be made to the secretary of the American section, Geo. Oakley Totten, Jr., A.A.I.A., 808 Seventeenth Street, Washington, D. C.

BOOK REVIEWS.

BUNGALOWS. Henry H. Saylor. 1911. McBride, Winston & Co., New York. Cloth, $1.50 net.

So many architects are called upon to design bungalows for various needs that we are developing quite as many types of bungalow as in any other style of house construction. It is remarkable that in the new dictionary the word should be defined as "a house that looks as if it had been built for less money than it actually cost."

Mr. Saylor has selected excellent material—some of it familiar work through previous publication. The letterpress matter and the accompanying illustrations are presented in a manner which will give the book a large and popular call.

THE LANDSCAPE GARDENING BOOK. Grace Tabor. 1911. McBride, Winston & Co., New York. $2.00 net.

The gardening book is practical and simple in its treatment of a subject that becomes more and more attractive as the years pass. It will appeal to the architect and owner of every place where a garden spot is a possibility, and I feel that it should be made possible in very case as a part of the original scheme.

The illustrations in half-tone help out the explanatory text and there are various plans and layouts which furnish excellent ideas.

CIVIC ART. Thomas H. Mawson, Honorary A. R. I. B. A. Imported by Chas. Scribner's Sons, New York. Cloth; $20.00 net.

The author's original intention limited the writing of his book to parks, gardens and boulevards, but the subject seemed so closely associated with town planning—even a part of it—that the book as it now stands embraces a consideration of all those factors relating to civic design which bear upon it.

The illustrations are carefully selected and beautifully presented in color and half-tone, together with plans. It is one of the handsomest publications of recent years and a treasure box of useful information prepared by a master hand.

Mr. Mawson draws from the best knowledge of practice and experience and makes excellent comparisons between the old subjects and those of later periods.

THAT BILL OF EXTRAS.

POSSIBLY the greatest bugbear of owners and many architects in the past has been the bill of extras which used to follow every building operation, says Mr. Walter H. Kilham, architect, of Boston. Verbal orders or instructions given by the owner to the architect and repeated by him to the builder and then forgotten or not confirmed, on the theory that "it wouldn't cost much," have caused the shipwreck of many a promising young career and brought what was in many cases deserved reproach upon the profession. The remedy is simple and absolutely effective. Have special order blanks printed and numbered in triplicate. Let each one have a blank space large enough to contain a clear definition of the work to be done and the agreed price, with a notice to the effect that the order shall not be considered valid until signed by all three parties, owner, contractor and architect, and *make them* all sign all three copies before issuing the order. This takes time, sometimes several days, but the architect should insist upon the signatures even if the work stops. Occasionally an inexperienced owner, who may often be a sharp business man in his own line, will protest against the architect who "cannot take his word,"but firmness on the architect's part will bring its reward at the final settlement of the contract. The three copies allow each party to retain one for his files. I have followed this system through a fairly active business career of 13 years and have never had the slightest difficulty in settling any of the some 300 building operations conducted during that period, as every change, whether "extra" or "allowance" which went through the office, was fully vouched for in writing by all the parties interested. I believe it is well to have certain general clauses of the specification printed in fine type at the bottom of the order to assure the relation of the extra or changed work to the general contract.

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